

Notice of Allowability

Application No.

09/942,319

Examiner

Gregory F. Cunningham

Applicant(s)

SASAKI, NOBUO

Art Unit

2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment received 11/21/2005.
2. ☒ The allowed claim(s) is/are 2-7, 9-11, 13-20, 22-24, 26-31, 33-35, 37-44, 46-48, 50-55, 57-59, 61-68, 70-73.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

1. This action is responsive to amendment filed 11/21/2005.
2. The disposition of the claims is as follows: claims 2-7, 9-11, 13-20, 22-24, 26-31, 33-35, 37-44, 46-48, 50-55, 57-59, 61-68 and 70-73 are pending in the application. Claims 2, 26 and 50 are independent claims. Claims 1, 8, 12, 21, 25, 32, 36, 45, 49, 56, 60, 69 and 74-133 have been cancelled.

Claim Rejections - 35 USC § 102

3. In view of amended and cancelled claims and review of cited references, 102 rejections are withdrawn.

Double Patenting

4. In view of amended and cancelled claims, review of cited references and terminal disclaimer, double patenting rejections are withdrawn.

Allowable Subject Matter

5. Claims 2-7, 9-11, 13-20, 22-24, 26-31, 33-35, 37-44, 46-48, 50-55, 57-59, 61-68 and 70-73 are allowed.

6. The following is an examiner's statement of reasons for allowance:

Applicant's amended independent claims 2, 26 and 50 stand novel over the related prior art. For instance, while the related art of Dalrymple et al. (U.S. Patent Number 5,142,617), does make use of method and apparatus for tiling a display area defined by lines joining vertices with a surface normal vector associated with each vertex whereby the display area is subdivided into sub-display areas by calculating additional vertices and surface normal vectors by interpolation

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and rendering a given sub-display area by calculating intensity values at its vertices and tiling its area by linear interpolation of the calculated vertex intensity values, but does not disclose an which by processing an image defined by a combination of unit graphic forms splits said unit graphic forms into multiple sub-unit graphic forms, the image processing device comprising:

an interpolated line computation means for determining an interpolated line which is the line that interpolates a space between two vertices from an interpolation vector used for determining a line that interpolates a space between a given vertex and another vertex of vertices of said unit graphic forms and from coordinates of said vertices; and

an interpolated point computation means for determining as vertices of said sub-unit graphic forms, interpolated points which are points on said interpolated line;

wherein:

if a unit graphic form has vertices 1 through 4, a line segment which joins vertices 1 and 2 of said vertices 1 through 4 and a line segment that joins vertices 3 and 4 of said vertices 1 through 4 lie opposite each other, and a line segment which joins said vertices 1 and 3 and a line segment that joins said vertices 2 and 4 lie opposite each other; said interpolated line computation means determines an interpolated line 1 which interpolates a space between said vertices 1 and 2, an interpolated line 2 which interpolates said vertices 3 and 4, an interpolated line 3 which interpolates a space between said vertices 1 and 3, and an interpolated line 4 which interpolates said vertices 2 and 4, and also determines an interpolated line 5 which interpolates a space between an interpolated point on said interpolated line 1 and an interpolated point on said interpolated line 2; and said interpolated point computation means determines interpolated points on said interpolated lines 1 through 5 as vertices of said sub-unit graphic forms.

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Therefore as claimed by the combined elements of amended independent claims 2, 26 and 50, the cited references and prior art of record lack separately and in combination the elements of amended claims.

Claims (3-7, 9-11, 13-20, 22-24), (27-31, 33-35, 37-44, 46-48), (51-55, 57-59, 61-68 and 70-73) depend from independent claims 2, 26 and 50, (respectively), and therefore are also allowed.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Responses

8. Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231. If applicant desires to fax a response, (703) 872-9306 may be used for formal communications.

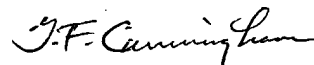
Inquiries

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory F. Cunningham whose telephone number is (571) 272-7784.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Greg Cunningham

Examiner

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1/17/2006



**MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**